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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,902	10/11/2001	Mikio Hashimoto	ZU-292.01A	1053

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EXAMINER

WILSON, DONALD R

ART UNIT	PAPER NUMBER
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1713

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DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,902

Applicant(s)

HASHIMOTO ET AL.

Examiner

Donald R Wilson

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-17 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/302,651.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 5 6) ☐ Other:

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DETAILED ACTION**Status of Application**

1. This application is a continuation of parent application Serial No. 08/490608. It is noted that instant Claims 1-17 correspond directly to Claims 25-41 of said parent application, which were finally rejected and objected to in the Office Action of 4/11/01, Paper No. 34. Therefore the same rejections and objections, except for the rejection of Claim 3, are made in this application and the action is made final (See MPEP §706.07(b)).

Claim Rejections - 35 USC /§ 103(a)

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1-2 and 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaleck, taken with Cohen and JP'507.** The citations to JP'507 refer to the English language translation previously supplied.

5. Spaleck discloses polymerization of polypropylene utilizing substituted indenyl metallocene catalyst systems in which the metallocene can have a formula within the scope of applicant's claimed formula (see cols. 1, 2, 3, 9 and 20). Note that the catalysts of Spaleck contain indenyl rings which both have substituents at the 2- and 4-positions, which may be either alkyl or aryl, include zirconocenes, and encompass catalysts with silyl bridging groups (e.g., Claims 1 and 2). Spaleck also teaches that the molecular weight and stereotacticity are established by choosing suitable substituents in the 2- and 4-positions. The catalyst systems are taught to be very effective and produce high yield products (abstract

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and examples). Spaleck is deficient in not teaching the use of blends of higher and lower molecular weight polypropylene polymers. However, the use of mixtures of higher and lower molecular weight polypropylene polymers to obtain a broad molecular weight distribution having improved rigidity, moldability and processability, is well known in the art as for instance is taught by JP'507 (p. 6, 1st full ¶) and Cohen (col. 5, line 29 to col. 6, line 10, Claim 1). It would have been obvious to one of ordinary skill in the art to formulate mixtures of high and low molecular weight polymers with the polymers taught by Spaleck in order to obtain the same benefits taught by either JP'507 or Cohen for mixtures of high and low molecular weight polypropylenes. The intrinsic viscosities of the high and low molecular weight polymers taught by JP'705 (see Claim 1), and the high and low molecular weights of the polymers taught by Cohen (see Claim 1) appear to encompass the MFR ratios of the instantly claimed compositions. Lacking a showing of criticality for the specific limits of the ratios of MFR's, it would have been obvious to one of ordinary skill in the art to select ranges from within those taught by JP'705 and Cohen which meet the limitations of the instantly claimed invention, with the expectation of equivalent results to the other ratios of MFR's within the teachings of JP'705 and Cohen.

6. **Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaleck, in view of Cohen and JP'507, as applied to claims 1-2 and 6-17 above, and further in view of EP'125, Schenkerberg, Smith, Exxon¹ Thiersault, and/or EP'770².**

7. EP'125 disclose propylene polymer blends comprising a high MFI polypropylene, 0.001-5 g/10 min, a low MFI polypropylene, 1-10⁴ g/10 min, which form a bimodal molecular weight polypropylene compositions, along with an ethylene/propylene copolymer having an ethylene content of 75 to 20 wt.% ethylene. The compositions are taught to have good mechanical properties, particularly rigidity, and processability. (See English language abstract). Smith teaches the use of ethylenepropylene rubbers (30 to 80 wt.% ethylene) in polypropylene blends in order to increase impact strength (see col. 1-2). Exxon (page 7), Thiersault (col. 1, lines 17-23), and EP'770 (page 2), each teach the use of amorphous

¹ Yu, et al., Exxon Chemical Company, "Polyolefin Modification with EXACT™ Plastomers", SPE RETC Polyolefins VIII Conference, Houston Texas, pp 1-9 February 1993. Reference previously identified as EXXON, supplied by applicant in an IDS filed 11/12/96, Paper No. 8. The reference was identified in the IDS as "Exxon-"Polyolefin Modification with EXACT™ Plastomers, Feb. 1993-pp 1-9."

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copolymers of ethylene and propylene to improve the impact strength and/or toughness of isotactic polypropylene compositions. The ethylene/propylene copolymers of EP'125 and the ethylene copolymer rubbers of Smith, would also be expected to be amorphous or have low crystallinity. It would have been obvious to one of ordinary skill in the art to incorporate amorphous or low crystallinity ethylene propylene copolymers, in the amounts of the instantly claimed invention, into the compositions of Spaleck, in view of Cohen and JP'507, for the purpose of improving the impact resistance and/or toughness as taught by EP'125, Smith, Exxon, Thiersault, and/or EP'770.

Objection to Claims

8. Claims 1-3 are objected to because of the following informalities: There should be an "an" prior to "aryl" in the 8th, 8th and 16th line of each claim, respectively. Appropriate correction is required.

Allowable Subject Matter

9. Claim 3 would be allowable if amended to overcome the above objection. The previous rejection of the equivalent claim in the parent application, Claim 27, is not applied, as there is no motivation to use a blend of conventional Ziegler Natta polymer as taught in Cohen or JP'507 with a metallocene catalyzed polypropylene as taught by Spaleck. There is also no motivation to substitute a polypropylene as taught by Saleck for one of the polypropylenes taught by Cohen of JP'507. No other prior art has been identified which discloses or suggests the invention of instant Claim 3.

Final Rejection

10. This is a continuation of applicant's earlier Application No. 08/490,608. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

² This rejection has been simplified by dropping Schenkerberg from the previously applied rejection.

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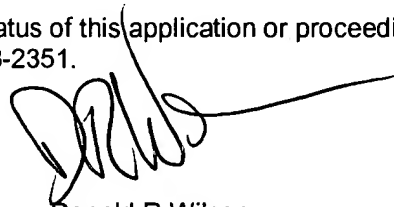
the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Future Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald R Wilson whose telephone number is 703-308-2398.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 703-308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications. The unofficial direct fax phone number to the Examiner's desk is 703-872-9029.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-2351.

A handwritten signature in black ink, appearing to read 'DR Wilson', with a long horizontal line extending to the right.

Donald R Wilson
Primary Examiner
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